News and Resources from the National Institutes of Health

Diabetes Dateline

National Diabetes Information Clearinghouse Spring/Summer 2009

New Survey Results Show Huge Burden of Diabetes

Study Includes Sensitive Test of Blood Glucose Abnormalities

Nearly 13 percent of U.S. adults age 20 and older have diabetes, but 40 percent of them have not been diagnosed, according to a study by epidemiologists from the National Institutes of Health (NIH) and the Centers for Disease Control and Prevention (CDC).

A Diabetes Epidemic

"We're facing a diabetes epidemic that shows no signs of abating, judging from the number of individuals with pre-diabetes," said Catherine Cowie, Ph.D., lead author of the study and director of the National Institute of Diabetes and Digestive and Kidney Diseases' (NIDDK's) Diabetes Epidemiology Program. Pre-diabetes is a condition marked by elevated blood glucose, also called blood sugar, that is not yet in the diabetic range.

The study is based on 2005–2006 National Health and Nutrition Examination Survey (NHANES) data collected by the CDC's National Center for Health Statistics. Data included readings from the fasting blood glucose (FBG) test and the oral glucose tolerance test (OGTT). Whereas the FBG test is a measure of blood glucose after an overnight fast, the OGTT is a measure of blood glucose 2 hours after a person drinks a premeasured sugary beverage.

The OGTT gives more information about blood glucose abnormalities than the FBG test. The FBG test is easier to administer and less costly

than the OGTT, but the 2-hour test is more sensitive in identifying diabetes and pre-diabetes, especially in older people. Thus the FBG is generally used for diagnosis in clinical practice, but the OGTT is preferred for research.

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NIDDK
National Institute of Diabetes and Digestive and Kidney Diseases

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Greater Confidence

"For years, diabetes prevalence estimates have been based mainly on data that included a fasting glucose test but not an OGTT," said Cowie. The 2005–2006 NHANES is the first national survey in 15 years to include the OGTT. "The addition of the OGTT gives us greater confidence that we're seeing the true burden of diabetes and pre-diabetes in a representative sample of the U.S. population."

"We're facing a diabetes epidemic that shows no signs of abating, judging from the number of individuals with pre-diabetes."

Catherine Cowie, Ph.D.
Director, Diabetes Epidemiology Program, NIDDK

Diabetes is a group of diseases marked by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. Diabetes is the most common cause of blindness, kidney failure, and amputations in adults and a leading cause of heart disease and stroke. Type 2 diabetes accounts for up to 95 percent of all diabetes cases and virtually all cases of undiagnosed diabetes. Pre-diabetes, which causes

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U.S. Diabetes and Pre-diabetes Statistics: 2005–2006 Versus 1988–1994

Researchers from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) and the Centers for Disease Control and Prevention analyzed data from two National Health and Nutrition Examination Surveys, one for 2005–2006 and the other for 1988–1994, and found the following:

- Nearly one-third of people ages 65 and older have diabetes; an additional 40 percent have pre-diabetes.
- The rate of diagnosed diabetes increased between the surveys, but the rate of undiagnosed diabetes remained relatively stable.
- The overwhelming majority of people with pre-diabetes have not been diagnosed, and this finding is unchanged despite research showing that weight loss through lifestyle changes can delay progression to diabetes in people identified with pre-diabetes.
- Minority groups continue to bear a disproportionate burden. The prevalence of diabetes, both diagnosed and undiagnosed, in non-Hispanic blacks and Mexican Americans is about 70 to 80 percent higher than that of non-Hispanic whites.
- Diabetes prevalence was virtually the same in men and women, as was the proportion of undiagnosed cases.
- Pre-diabetes is more common in men than in women—36 percent compared with 23 percent.
- Diabetes rates are low in youths between the ages of 12 and 19, but about 16 percent have pre-diabetes.

"These findings have grave implications for our health care system, which is already struggling to provide care for millions of diabetes patients, many of whom belong to vulnerable groups, such as the elderly or minorities," said NIDDK Director Griffin P. Rodgers, M.D., M.A.C.P. "Of paramount importance is the need to curb the obesity epidemic, which is the main factor driving the rise in type 2 diabetes." ■

Diabetes
Dateline

National Diabetes Information Clearinghouse
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CELEBRATING 25 YEARS

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If you would like to subscribe, go to *http://catalog.niddk.nih.gov/newsletter.cfm*. You can read or download a PDF version of the newsletter at *www.diabetes.niddk.nih.gov/about/newsletter.htm*.

Executive Editor: Judith Fradkin, M.D.

Dr. Fradkin is the director of the Division of Diabetes, Endocrinology, and Metabolic Diseases for the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), part of the National Institutes of Health in Bethesda, MD. Dr. Fradkin earned her M.D. from the University of California at San Francisco and completed an internship and residency at Harvard's Beth Israel Hospital in Boston. Dr. Fradkin came to the NIDDK as a clinical associate in 1979 after an endocrinology fellowship at Yale University. She has overseen NIDDK-supported research in various roles, directing the Institute's research programs in diabetes, cystic fibrosis, endocrinology, and metabolic diseases. A practicing endocrinologist, Dr. Fradkin continues to treat patients at the National Naval Medical Center in Bethesda, where she worked as a staff endocrinologist in the early 1980s.

Study Tests Anti-inflammatory Drug for Poorly Controlled Type 2 Diabetes

"The outcome of this study has the potential for significant public health benefit."

Myrlene Staten, M.D.
Senior Adviser, Diabetes Translational Research, NIDDK

Researchers in 20 medical centers across the nation are enrolling adults with type 2 diabetes who have poorly controlled blood glucose, also called blood sugar, in the clinical study Targeting Inflammation with Salsalate in Type 2 Diabetes (TINSAL-T2D).

The study, funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) at the National Institutes of Health, is investigating whether salsalate, an anti-inflammatory drug used for years to manage arthritis pain, can reduce blood glucose levels in people with type 2 diabetes. If successful, the trial could lead to an effective, inexpensive way to treat the most common form of diabetes.

The study is based on the promising results of earlier NIDDK-funded studies at Joslin Diabetes Center in Boston, showing that salsalate effectively lowered blood sugar levels when given for 3 months to adults with type 2 diabetes. Now researchers want to determine whether the drug will be well tolerated and effective over a longer period of time.

"This important study is testing whether reducing inflammation with this drug will be an effective treatment for type 2 diabetes," said principal investigator Steven E. Shoelson, M.D., Ph.D., associate director of research at Joslin and professor of medicine at Harvard Medical School. "Given what we're learning about the role of inflammation in the development of type 2 diabetes, this therapy might be getting at an underlying cause of the disease. We hope this drug will provide an additional tool for improving glucose control and thus reducing the risk of diabetes complications."

Type 2 diabetes often leads to complications, including cardiovascular disease, blindness, kidney disease, and amputations. People with type 2 diabetes die at rates two to four times higher than those who do not have diabetes.

Chemically Similar to Aspirin

Salsalate, which belongs to a class of drugs called nonsteroidal anti-inflammatory drugs (NSAIDs), is approved by the U.S. Food and Drug Administration to relieve mild to moderate pain, fever, arthritis, and other musculoskeletal conditions. Chemically similar to aspirin, it has fewer side effects and has been used for more than 40 years to treat pain associated with arthritis.

"Recent studies in people show that salsalate also lowers blood glucose, but further testing is

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no symptoms, substantially raises the risk of heart attack or stroke and of developing type 2 diabetes.

National Sample

The survey included 7,267 people, who represented a national sample of participants ages 12 and older. Participants were interviewed in their homes and received a physical exam. FBG and OGTT readings were taken. The findings were then compared with those of the last NHANES survey that included the OGTT, which was conducted from 1988 to 1994. The researchers reported their findings in the February 2009 issue of *Diabetes Care*.

For more information about diabetes, including health information for the public, visit *www.diabetes.niddk.nih.gov*. ■

Improving Delivery of Diabetes Care

Primary health care practices that proactively deliver diabetes care see greater improvements in patients' cholesterol, blood pressure, and blood glucose levels and adherence to routine screenings such as foot checks, according to results from a trial funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK).

"Problems with the organization and delivery of health care services contribute to the nation's inability to reach current evidence-based goals for optimal chronic disease control."

Kevin Peterson, M.D., Ph.D.
Associate Professor, University of Minnesota, et al.

"Problems with the organization and delivery of health care services contribute to the nation's inability to reach current evidence-based goals for optimal chronic disease control," wrote Kevin Peterson, M.D., M.P.H., an associate professor at the University of Minnesota, and co-authors, whose report appeared in the December 2008 issue of *Diabetes Care*.

The TRANSLATE trial, which involved 24 community primary practices and more than 8,000 patients, tested whether an intervention—specific changes to the process of delivering care—could improve the control of patients' diabetes. The intervention included establishing an electronic diabetes registry for each practice, which produced visit reminders, patient-specific physician reminders, identification of patients with incomplete or overdue tests, alerts of patients with elevated clinical diabetes measures, and a monthly summary for practice staff.

People with type 2 diabetes cannot regulate blood glucose, also called blood sugar, normally, which contributes to a variety of health problems, including cardiovascular disease, blindness, kidney disease, and amputations. Most people with diabetes do not achieve levels of glucose, blood pressure, and cholesterol proven to reduce heart disease and other diabetes complications.

Improvements

Use of the intervention by the practices led to increases in the percentage of diabetes patients who met performance measures for foot and eye examinations, tests for kidney function, blood pressure monitoring, and tests for cholesterol and hemoglobin A1C (A1C)—a 3-month average of blood glucose levels.

After 1 year, patients in practices using the intervention showed significantly greater improvement in achieving the recommended levels for blood pressure, cholesterol, and A1C than patients in control practices. The new research shows that a multifaceted organizational intervention in community primary practices can significantly improve diabetes care and outcome.

The NIDDK supported this trial as part of an initiative to develop cost-effective and sustainable interventions that could be adapted in real-world settings to prevent and control diabetes and obesity. ■

Lifestyle Intervention and Metformin May Prevent Progression from Gestational Diabetes to Type 2 Diabetes

Among women with pre-diabetes, those who also have a history of diabetes during pregnancy, called gestational diabetes mellitus (GDM), have an even greater risk of developing type 2 diabetes than those with pre-diabetes alone. A new analysis from the Diabetes Prevention Program (DPP) shows that women with pre-diabetes and GDM were able to prevent or delay progression to type 2 diabetes with an intensive lifestyle intervention (ILS) or by taking the drug metformin.

"GDM offers not just a warning for future DM but also an important opportunity to intervene and prevent incident cases."

Jeffrey L. Ecker, M.D.
Associate Professor of Obstetrics, Gynecology, and Reproductive Biology, Harvard Medical School

"Both intensive lifestyle [intervention] and metformin are highly effective in delaying or preventing diabetes in women with pre-diabetes and a history of GDM," according to Robert E. Ratner, M.D., DPP principal investigator, and co-authors, whose report was published in the December 2008 issue of *The Journal of Clinical Endocrinology and Metabolism*.

GDM is brought on by pregnancy and can lead to pregnancy-related complications, including high blood pressure and larger babies. Additionally, most women with GDM eventually develop type 2 diabetes. Pre-diabetes is defined as a blood glucose level higher than normal but not high enough to constitute diabetes.

Preventing Diabetes

Sponsored by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), the DPP, a multicenter clinical trial, enrolled 3,234 people with pre-diabetes, including 350 women with a history of GDM, and randomized them to one of three possible groups: an ILS group, which received diet modification and exercise counseling; a metformin group, which took 850 milligrams of the antidiabetic drug metformin twice daily; and a placebo control group, which took an inactive pill similar in appearance to metformin.

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needed to determine its long-term safety and efficacy in patients with diabetes," said co-principal investigator Allison B. Goldfine, M.D., director of clinical research at Joslin and associate professor of medicine at Harvard Medical School.

"The outcome of this study has the potential for significant public health benefit," said Myrlene Staten, M.D., NIDDK senior adviser for diabetes translational research. "If salsalate improves the control of type 2 diabetes, we would have a much-needed, inexpensive addition to our arsenal of drug options."

Enrollment Criteria

For the TINSAL-T2D study, researchers are seeking adults ages 18 to 75 with poorly controlled blood glucose levels. Participants may be taking no more than two oral medications but not insulin. For other entry criteria and a list of sites participating in the study, go to *www.ClinicalTrials.gov* and search for trial NCT00799643. For more information about the study, see *http://tinsalt2d.org* or contact Dr. Goldfine at 617–732–2643, *Allison.Goldfine@joslin.harvard.edu*.

For more information about diabetes, including health information for the public, visit *www.diabetes.niddk.nih.gov*. ■

Lifestyle Intervention, from page 5

Over a 3-year period, the incidence of diabetes in the ILS and metformin groups was 58 and 31 percent lower, respectively, than the placebo group.

GDM is brought on by pregnancy and can lead to pregnancy-related complications, including high blood pressure and larger babies.

Diabetes is a condition in which the amount of blood glucose, also called blood sugar, is too high. Over time, elevated blood glucose damages blood vessels, leading to a variety of complications, including heart disease, stroke, blindness, and lower limb infections.

Type 2 diabetes, by far the most common kind of diabetes among adults, results from cells in the body failing to properly use insulin—a hormone used to transfer glucose from the bloodstream into cells. The body's inability to properly use insulin is called insulin resistance. People with type 2 diabetes also make less insulin.

Progression to Diabetes

Because GDM was a known risk factor for the development of type 2 diabetes, DPP researchers compared outcomes of the 350 women in the study with a history of GDM with 1,416 women in the study with at least one live birth but no history of GDM.

After 3 years, among women randomized to the placebo group, those with a history of GDM had a 71 percent greater incidence of type 2 diabetes compared with women with no history of GDM.

"Those women randomized to placebo therapy represent uninterrupted progression of pre-diabetes within the DPP," wrote Ratner and colleagues.

While taking metformin provided no statistically significant benefit to women without a history of GDM, it lowered incidence of diabetes 50 percent among women with a history of GDM. ILS, however, decreased diabetes incidence by about 50 percent, regardless of GDM history, when compared with respective placebo controls.

"GDM offers not just a warning for future DM but also an important opportunity to intervene and prevent incident cases," wrote Jeffrey L. Ecker, M.D., associate professor of obstetrics, gynecology, and reproductive biology at Harvard Medical School, in a companion editorial. According to Ecker, the report by Ratner and colleagues emphasizes what previous DPP results argued: women with pre-diabetes after GDM should be encouraged to follow a plan of lifestyle modification or begin metformin treatment.

Ecker argued that DPP results should be a "call to action" for obstetricians, internists, and patients to follow up on GDM diagnoses after pregnancy to prevent progression to diabetes.

ILS clearly benefitted all groups in the study; however, women with a history of GDM had more difficulty maintaining target goals for physical activity, lost less weight in the first year of the intervention, and were quicker to regain weight over time. Metformin, one of the most widely prescribed medications for type 2 diabetes, is inexpensive and has relatively few side effects. In the DPP, metformin was particularly effective in younger and heavier participants.

The National Diabetes Information Clearinghouse, an information service of the NIDDK, offers free publications about gestational diabetes. For more information, go to *www.diabetes.niddk.nih.gov*. ■

NIDDK Director Griffin P. Rodgers Testifies on Capitol Hill


JDRF photo by Camera 1.

On June 24, 2009, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Director Griffin P. Rodgers, M.D., M.A.C.P., testified on Capitol Hill about progress in type 1 diabetes research. He was joined by boxing legend Sugar Ray Leonard, actress Mary Tyler Moore, and teen musician Nick Jonas of the Jonas Brothers. The three celebrities urged Congress to continue support of type 1 diabetes research.

JDRF photo by Camera 1.

"More people with type 1 diabetes are living longer, healthier lives today than ever before."

Griffin P. Rodgers, M.D., M.A.C.P.
Director, NIDDK

"The need to pursue the prevention and cure of diabetes through research is greater than ever," Rodgers told the Senate Committee on Homeland Security and Governmental Affairs at the congressional hearing "Type 1 Diabetes Research: Real Progress and Real Hope for a Cure," held by Sens. Joe Lieberman and Susan Collins.

Type 1 diabetes results from an autoimmune destruction of cells in the pancreas that produce insulin, a vital hormone that controls blood glucose, also called blood sugar. About 1.2 to 2.4 million Americans have type 1 diabetes, which can lead to serious complications such as cardiovascular disease, blindness, and amputations.

Children's Congress

The hearing was held in conjunction with the Juvenile Diabetes Research Foundation International (JDRF) Children's Congress, the largest media and grassroots event held in support of finding a cure for type 1 diabetes. Since 1999, the JDRF Children's Congress has convened biennially to raise awareness about type 1 diabetes and to encourage Congress to support type 1 diabetes research. This year, 150 children ages 4 to 17, representing all 50 states and the District of Columbia, came to Washington, D.C., to meet with congressional leaders and President Obama.

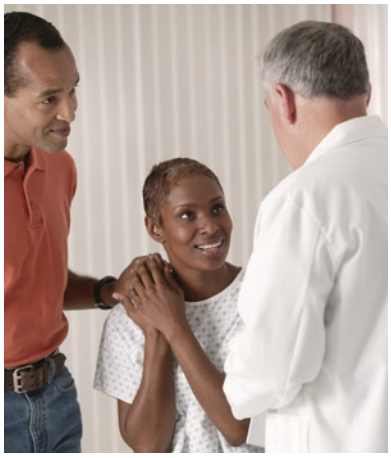
At the hearing, Rodgers summarized work made possible by the Special Statutory Funding Program for Type 1 Diabetes Research, including genetic studies that have so far identified at least 40 genes that influence the development of type 1 diabetes; the Environmental Determinants of Diabetes in the Young (TEDDY) study, which is identifying environmental contributors to type 1 diabetes; studies to identify new sources of insulin-producing cells, including stem cells; clinical trials testing approaches to delay or prevent type 1 diabetes; and research into improving devices, such as continuous glucose monitors and insulin pumps, that help control blood glucose levels.

"More people with type 1 diabetes are living longer, healthier lives today than ever before," said Rodgers. "Current research offers hope for continuing improvements in care, and perhaps even suggests we may one day be able to prevent or cure the disease."

At a related event, Rodgers was awarded a JDRF Children's Congress Hero Award—the JDRF's top honor—for his steadfast commitment to finding a cure for type 1 diabetes. "I am honored to accept this award on behalf of the NIDDK and join the ranks of [JDRF] Children's Congress Hero awardees," said Rodgers. "I am very fortunate to lead the scientists and staff of the NIDDK who, with unwavering dedication and passion, work to advance the frontiers of research on diabetes and other serious chronic diseases."

Rodgers Testifies on Capitol Hill, continued on page 9

NIH Recruits Participants for Islet Transplantation Trials



The National Institutes of Health (NIH)-funded Clinical Islet Transplantation Consortium (CITC) is recruiting participants, including people with kidney transplants, for several studies aimed at improving the safety and long-term success of transplanting islets in people with type 1 diabetes.

Islets are clusters of cells in the pancreas that produce insulin—a vital hormone that moves blood glucose, also called blood sugar, out of the bloodstream and into the body's cells. People with type 1 diabetes lose their ability to produce insulin due to an autoimmune process that destroys the islets and then must inject or infuse insulin.

Islet transplantation transfers islets from a deceased donor to a recipient's liver. Ideally, the new islets begin making insulin and the recipient becomes insulin independent—meaning insulin injections or infusions are no longer needed. But even recipients who do not achieve insulin independence often gain better control of their diabetes and have fewer episodes of low blood sugar.

Transplanted islets, however, are recognized by the body's immune system as foreign and are destroyed unless immunosuppressive drugs are taken to prevent rejection. These drugs can have toxic effects, including preventing islets from dividing.

Whereas 70 percent of people who receive islet transplants achieve insulin independence, only 23 percent remain insulin independent 3 years post-transplantation, according to the Collaborative Islet Transplantation Registry (CITR), which is funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). The CITR is the largest collection of human islet transplantation data.

Patients who receive, on average, greater numbers of islets or multiple transplants typically have better outcomes, but donor islets are difficult to procure in adequate quantities. Better methods for islet preparation will reduce islet cell death and increase the number of islets available for transplantation.

New Studies

Eight clinical islet transplantation protocols are currently recruiting patients. The first CITC transplant took place in late 2008. CITC sites have conducted about 17 transplants thus far and have several participants waiting for donor islets to become available, according to Thomas Eggerman, M.D., director of the NIDDK's Clinical Islet Transplantation Program.

Current CITC studies focus on

- improving the number of islets that survive transplantation
- reducing complications of the islet transplant procedure, such as bleeding and clotting of blood vessels in the liver
- reducing the side effects of immunosuppressive drugs
- achieving good blood glucose control without hypoglycemia
- following the fate of islets after transplantation and determining why donor islets sometimes fail
- evaluating new ways to safely prevent immune system rejection of donor tissues

Islet Transplantation Trials, continued on page 9

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Special Funding

The Special Statutory Funding Program for Type 1 Diabetes Research, which began in 1997, is administered by the NIDDK under the auspices of the Diabetes Mellitus Interagency Coordinating Committee, which facilitates cooperation, communication, and collaboration among Government entities addressing diabetes. The program currently provides $150 million annually to research specifically targeting type 1 diabetes. This funding is in addition to regularly appropriated funding that supports research of all forms of diabetes, including type 1 diabetes. Without renewal, the special funding will terminate in 2011.

The JDRF's efforts, including the Children's Congress, have been instrumental in the continuation and expansion of the Special Statutory Funding Program.

"I ask that each of you join me in supporting the renewal of the Special [Statutory Funding] Program next year so that the researchers can continue their work on a cure for our disease," testified Jonas, who announced in 2005 that he has type 1 diabetes. "My life depends on it."

For more information about the Special Statutory Funding Program for Type 1 Diabetes Research, visit *www.t1diabetes.nih.gov*.

For more information about the JDRF Children's Congress, visit *www.cc.jdrf.org*.

The National Diabetes Information Clearinghouse, an information service of the NIDDK, offers free publications about type 1 diabetes. For more information, go to *www.diabetes.niddk.nih.gov*. ■

Islet Transplantation Trials, from page 8

Candidates for the studies include people with hard-to-control type 1 diabetes and people with type 1 diabetes who have had a kidney transplant.

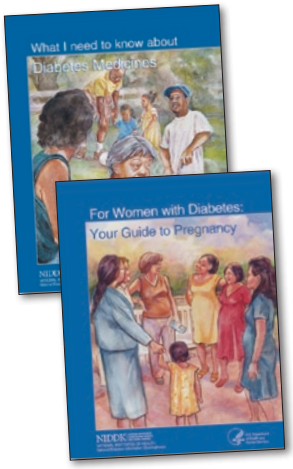
People with hard-to-control diabetes have episodes of severe low blood glucose, called hypoglycemia, and hypoglycemia unawareness—the inability to recognize when blood glucose drops to a dangerously low level.

Kidney transplant recipients are logical candidates for islet transplantation studies, said Eggerman, because they are already taking immunosuppressive drugs, which represents the greatest risk with islet transplantation. Participants enrolled in the Islet after Kidney Transplantation study will maintain their current immunosuppressive therapy.

For more information about the islet transplantation studies, call 1–877–isletstudy (1–877–475–3878) or visit *www.citisletstudy.org*. The National Diabetes Information Clearinghouse (NDIC), an information service of the NIDDK, offers free publications about diabetes, including the fact sheet *Pancreatic Islet Transplantation*. For more information or to obtain copies, visit the NDIC at *www.diabetes.niddk.nih.gov*. ■

The Clinical Islet Transplantation Consortium includes the following sites and investigators:

- University of Miami
  Camillo Ricordi, M.D.
- University of Minnesota, Minneapolis
  Bernhard J. Hering, M.D.
- University of Pennsylvania, Philadelphia
  Ali Naji, M.D., Ph.D.
- Emory University, Atlanta
  Christian Larsen, M.D., D. Phil.
- Northwestern University, Chicago
  Dixon B. Kaufman, M.D., Ph.D.
- University of Alberta, Canada
  James Shapiro, M.D., Ph.D., F.R.C.S.C.
- University of California, San Francisco
  Peter Stock, M.D., Ph.D.
- University of Illinois at Chicago
  Jose Oberholzer, M.D.
- Uppsala University, Sweden
  Gunnar Tufveson, M.D., Ph.D.
- Karolinska University, Sweden
  Annika Tibell, M.D., Ph.D.
- University Hospital Rikshospitalet, Norway
  Aksel Foss, M.D.
- University of Iowa (Clinical Trials Statistical & Data Management Center), Iowa City
  William R. Clarke, Ph.D.



NIDDK Publications Win NIH Plain Language Awards

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) was recognized in this year's National Institutes of Health (NIH) Plain Language Awards competition for producing two easy-to-read booklets about diabetes. An awards ceremony was held June 2 at the NIH campus in Bethesda, MD.

For Women with Diabetes: Your Guide to Pregnancy, which won a bronze award, was designed to help pregnant women with pre-existing diabetes learn how to lower the risk of health problems for themselves and their babies by controlling blood glucose levels before and throughout pregnancy. This booklet uses everyday words to explain concepts in an encouraging tone and includes numerous illustrations and interactive sections.

What I need to know about Diabetes Medicines, which won a silver award, provides essential information about each type of diabetes medicine. The booklet contains removable inserts designed to facilitate instruction.

The NIH created the Plain Language Awards to promote the NIH Plain Language Initiative, established in response to a 1998 White House memorandum calling for all Federal Government writing to be in an easy-to-read format. The booklets can be downloaded or ordered through the NIDDK website at *www.niddk.nih.gov*. ■

Germino Appointed NIDDK Deputy Director

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Director Griffin P. Rodgers, M.D., M.A.C.P., announced the appointment of Gregory G. Germino, M.D., as the NIDDK's deputy director. Germino came to the NIDDK from The Johns Hopkins University School of Medicine, where he held dual appointments in the Division of Nephrology and the Department of Molecular Biology and Genetics.

In addition to his world-class scientific expertise and perspective as a National Institutes of Health (NIH) grantee, Germino's management experience, commitment to mentoring the next generation of researchers, and work with professional and patient advocacy organizations makes him especially well suited to help the NIDDK advance research on many of the most serious health issues affecting the public.

Germino identified *PKD1*, the primary gene involved in autosomal dominant polycystic kidney disease. He also developed novel methods for detecting altered genes and for characterizing the *PKD1* protein and its role in cell signaling pathways and cell-cycle regulation.

After graduating *summa cum laude* in biology from Loyola University of Chicago, Germino earned his medical degree from the Pritzker School of Medicine at the University of Chicago. He served his internship and residency in internal medicine and completed a clinical fellowship in nephrology at Yale University before spending a research year at Oxford University in England.

Germino has been an NIH grantee since 1994. He has written more than 70 peer-reviewed publications and has authored more than a dozen book chapters. He has been a visiting professor and invited lecturer across the United States and around the world. ■

NIDDK Appoints Levin as Scientific Director

Ira Levin, Ph.D., will take the post of scientific director of the Intramural Research Program (IRP) for the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK).

With a Ph.D. in chemistry from Brown University, Levin has focused recently on applying vibrational infrared and Raman spectroscopic techniques to elucidate the conformational, dynamical, thermodynamic, and functional properties of both intact and model cellular membranes.

Levin has more than 45 years of experience working for the National Institutes of Health, including 14 years as the NIDDK's deputy scientific director and 3 years as acting director of the NIDDK's IRP. Concurrently, Levin served as chief of the NIDDK's Molecular Biophysics Section.

The NIDDK's IRP conducts basic, translational, and clinical biomedical research related to diabetes and other endocrine disorders, bone and metabolic diseases, nutritional disorders, and digestive, kidney, and hematologic diseases. Intramural research is conducted at the Institute's laboratories and clinical facilities in Bethesda, MD, and in Phoenix.

To learn more about the NIDDK's IRP, visit *www2.niddk.nih.gov/NIDDKLabs/NIDDKLabs.htm*. ■

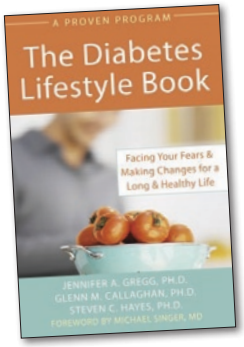
Kranzfelder Appointed Director of NIDDK Office of Communications and Public Liaison

Kathy Kranzfelder has been named director of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Office of Communications and Public Liaison (OCPL). As director, Kranzfelder will serve as a member of the NIDDK's senior leadership team and provide advice and guidance on external communications to the NIDDK director and the Institute.

Kranzfelder came to the NIDDK to cover "intramural," or on-campus, basic and clinical research from a similar post at the National Institute of Neurological Disorders and Stroke. In 1993, she was named director of the NIDDK's national health information clearinghouses and in 1994, she launched the NIDDK's website—one of the first Institute websites at the National Institutes of Health.

As OCPL director, Kranzfelder will oversee staff managing the NIDDK's response to the media, its online health information for the public, and its other award-winning national education and information programs, which include the National Diabetes Education Program, the National Kidney Disease Education Program, and the Weight-control Information Network. In addition, she will continue to serve as director of the NIDDK's three national information clearinghouses until a successor is found.

To learn more about the NIDDK Information Clearinghouses, visit *www.niddk.nih.gov*. ■



Featured in the NIDDK Reference Collection

Diabetes and Lifestyle

The Diabetes Lifestyle Book: Facing Your Fears & Making Changes for a Long & Healthy Life offers practical suggestions for people coping with diabetes and its complications. Authors Jennifer A. Gregg, Ph.D.; Glenn M. Callaghan, Ph.D.; and Steven C. Hayes, Ph.D., focus on the barriers to comprehensive diabetes self-care—including barriers that may be self-inflicted—using a technique called acceptance and commitment therapy.

The book includes a set of self-knowledge exercises to help readers gain skills and strategies to push their health and life in positive directions. In 13 chapters, the book covers basic diabetes information, acceptance of diabetes, motivation and persistence, the role of commitment, food and nutrition, exercise and physical activity, medications, preventing and treating complications, behavior change, and the role of communication.

The authors use numerous case examples, stories about real people, and practical suggestions to implement everyday activities that help readers connect with the information provided, set and achieve realistic goals, and feel empowered. Specific self-knowledge exercises are provided throughout the book.

The 230-page book is available for $16.95 from New Harbinger Publications, Inc., 5674 Shattuck Avenue, Oakland, CA 94609, 1–800–748–6273, *www.newharbinger.com*.

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Reference Collection is a free, online database that helps health care professionals, health educators, patients, and the general public find educational materials not typically referenced in most databases. The NIDDK does not control or endorse the information contained in this collection; the information is provided as a convenience to our visitors. To find more resources about diabetes, visit *www.catalog.niddk.nih.gov/resources*. ■

Additional Resources

Large-print Publications

The National Diabetes Information Clearinghouse (NDIC) has formatted the following easy-to-read publications into large print to help readers with low vision:

- *Prevent diabetes problems: Keep your diabetes under control*
- *Prevent diabetes problems: Keep your feet and skin healthy*
- *Prevent diabetes problems: Keep your kidneys healthy*
- *Prevent diabetes problems: Keep your nervous system healthy*
- *Prevent diabetes problems: Keep your teeth and gums healthy*
- *What I need to know about Diabetes Medicines*
- *What I need to know about Eating and Diabetes*

These publications are available at *www.catalog.niddk.nih.gov/materials.cfm?CH=NDIC*.

Additional Resources,
continued on page 13

Additional Resources, from page 12

Updated Publications

The NDIC has updated the following publications:

- *Alternative Devices for Taking Insulin*
- *Financial Help for Diabetes Care*
- *Prevent diabetes problems: Keep your eyes healthy*

These publications are available at *www.diabetes.niddk.nih.gov*.

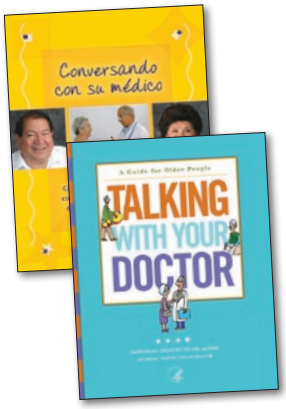
Updated Spanish-language Publication

The NDIC has updated one Spanish-language publication:

- *Cómo prevenir los problemas de la diabetes: Mantenga sanos los ojos (Prevent diabetes problems: Keep your eyes healthy)*

This publication is available at *www.diabetes.niddk.nih.gov/spanish/pubs/complications_eyes*.

National Institute on Aging Health Resources



The following publication is available from the National Institute on Aging, part of the National Institutes of Health (NIH):

- *Talking With Your Doctor: A Guide for Older People* (also available in Spanish: *Conversando con su médico: Consejos para lograr una buena comunicación entre las personas de la tercera edad y su doctor*)

This publication is available at *www.nia.nih.gov/HealthInformation/Publications/TalkingWithYourDoctor*.

Expanded Web Resources

The NDIC has expanded the following web resources:

- American Indians and Alaska Natives and Diabetes
- Asian Americans and Pacific Islanders and Diabetes
- African Americans and Diabetes
- Hispanics/Latinos and Diabetes

These web resources are listed at *www.diabetes.niddk.nih.gov/dm/a-z.asp*.

New Interactive Tools

New to the Interactive Health Education Tools section of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) website are

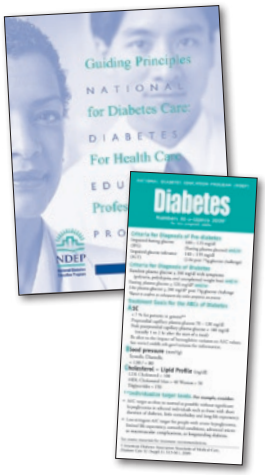
Podcasts

- New NIDDK-funded Study Holds Promise for Controlling Type 2 Diabetes
- 2008 Physical Activity Guidelines for Americans, Parts 1–3

The NIDDK interactive tools section consolidates tools and resources about diabetes from the NIH and the National Library of Medicine. To access these resources, visit *www.diabetes.niddk.nih.gov/resources/HealthTools*.

NDEP News

New and Revised Diabetes Prevention and Control Resources



The National Diabetes Education Program (NDEP) offers free resources to help health care professionals disseminate diabetes information to patients from a variety of cultural backgrounds. Patient education materials include adaptations for high-risk audiences such as African Americans, Hispanics/Latinos, American Indians, Alaska Natives, Asian Americans, Pacific Islander Americans, older adults, and women with a history of gestational diabetes and their children.

New and updated resources include the following:

- *Guiding Principles for Diabetes Care: For Health Care Professionals.* This evidence-based booklet outlines important patient-centered principles of diabetes care, helping health care professionals identify people with pre-diabetes and undiagnosed diabetes for treatment aimed at preventing long-term complications.
- *Diabetes Numbers At-a-Glance.* Based on American Diabetes Association clinical recommendations, this handy pocket guide provides a list of current recommendations for diagnosing and managing pre-diabetes and diabetes.
- *Capacity Building for Diabetes Outreach: A Comprehensive Tool Kit for Organizations Serving Asian and Pacific Islander Communities.* This comprehensive toolkit is designed to help organizations strengthen capacity in eight core areas: community assessment, evaluation, organizational support, staffing, building coalitions and partnerships, funding, community outreach, and marketing. Examples are drawn from experiences working with Asian American and Pacific Islander communities, but the worksheets and tools can be applied in any community.
- *The Road to Health* Toolkit. Designed for African Americans and Hispanics/Latinos at risk for type 2 diabetes, this toolkit provides materials to start a community outreach program reinforcing the message that type 2 diabetes can be delayed or prevented.

All NDEP materials are copyright-free and single copies are free of charge. Many are available on printer-ready CDs, making it convenient for organizations to add their logo and print desired quantities. Visit the NDEP at *www.YourDiabetesInfo.org* to download or order free materials or call 1–888–693–NDEP (1–888–693–6337), 1–866–569–1162 (TTY). ■

Upcoming Meetings, Workshops, and Conferences

The National Institute of Diabetes and Digestive and Kidney Diseases will exhibit at the following upcoming events:

American Academy of Family Physicians 2009 Scientific Assembly

October 14–17 in Boston.
For more information, visit *www.aafp.org*.

American Dietetic Association's Food and Nutrition Conference and Expo

October 17–20 in Denver.
For more information, visit *www.eatright.org*.

American Academy of Pediatrics National Conference and Exhibition

October 17–20 in Washington, D.C.
For more information, visit *www.aapexperience.org*.

American Academy of Nursing 36th Annual Meeting and Conference

November 5–7 in Atlanta.
For more information, visit *www.aannet.org*.

American Public Health Association 137th Annual Meeting and Expo

November 7–11 in Philadelphia.
For more information, visit *www.apha.org*. ■

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